Daniel Martí Casanova

Software Developer

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Passionate game developer with experience working as a software developer building interactive experiences for museums using game development tools, in computer graphics research and on on various small projects.

Self-motivated, with a good track record of working well with others, and an avid learner. Spanish and Catalan native speaker and proficient in English (C1).

Portfolio: damacaa.github.io

SKILLS

- **Programming languages**: C++, C#, .NET (WPF and Forms), Python, JavaScript, SQL.
- **Game Development Frameworks/Engines and tools:** Unity, Unreal Engine (Blueprints and C++), Godot, Visual Studio.
- **Development Practices:** version control with Git and PlasticSCM, design patterns, SOLID, OOP, DOP.
- **Graphics programming:** shaders, materials, GLSL, HLSL, OpenGL.
- **Game engine programming:** component systems, ECS, graphics APIs, physics programming, multi-threading.
- **Gameplay programming:** gameplay systems and logic, puzzle mechanics, and combat systems.
- **Project Management & Collaboration:** Agile methodologies, Jira, SCRUM, UML, Trello.
- **Graphics & Content Creation Tools:** Blender, 3ds Max, Photoshop, Figma.
- **Miscellaneous**: proven artistic skills (proportion, color, composition...), great communication skills.

EXPERIENCE

SNGULAR Studios - Junior Software Developer | Real Time Programmer

MARCH 2023 - PRESENT

- Contributed to real time interactive museum experiences built using game engines like Unity and Unreal.
- Interacted directly with designers to bring their concepts and ideas to life.
- Adapted to evolving project requirements and tight deadlines by implementing code with a focus on reusability and flexibility.
- Developed an internal .NET application that centralizes management and monitoring of interactive museum exhibits.

Rey Juan Carlos University, Madrid - Physics Research Assistant

OCTOBER 2021 - AUGUST 2022

- Worked on a state of the art machine learning project.
- Developed an efficient differentiable physics simulation engine in C++ intended for different game engines such as Unity or Unreal.

Personal projects

Collaborated with teams on various academic projects, work-related tasks, and personal projects. Competed in multiple game jams, where I consistently delivered high-quality projects within deadlines.

- **We're In The Same Boat:** a puzzle game for Android built with Unity and available in the Play Store. I implemented the puzzle logic, as well as a custom clue system using the A* algorithm.
- **Pond Platoon:** a browser-based procedural tower defense game built with Unity.
- **Weird Engine:** a custom C++ game engine that I use to learn more about game development, computer graphics and physics simulations..

EDUCATION

Rey Juan Carlos University, Madrid - Bachelor's Degree in Video Game design and development

SEPTEMBER 2018 - NOVEMBER 2022

Obtained multiple distinctions in subjects about OOP in C++ and Javascript, 3D physics simulation, and multiplayer web games using Javascript and Java for backend.

- "*Premio extraordinario de fin de carrera*": award for the highest GPA among the graduates in the class of 2023.
- Thesis: *Framework for inverse animation editing based on differentiable simulation*.